THE FARM INDEX

U.S. Department of Agriculture/December 1973

AMERICAN AGRICULTURE

ITS CAPACITY TO PRODUCE

Outlook

If November forecasts hit the mark, 1974 will be the first time in 14 years that U.S. farmers failed to put more land to soybeans. Planted acreage in 1974 is now projected at 54 million, 3 million less than in 1973.

Why the turnaround?

As explained in the November issue of ERS's *Fats and Oil Situation:*

Farmers will likely favor feed grains over soybeans in 1974. One incentive is the new feed grain program. There will be no set-aside requirement, no restrictions on planting for the 1974 crop, and no conserving base requirement through 1977.

Prices are a consideration too. ERS estimates that corn prices will average $2.30 per bushel in 1973/74 versus $5 for soybeans. A price ratio of 2.2 in soybeans' favor is not enough to persuade many growers to sow beans instead of corn.

Also, chances are that soybean prices will soften next spring. Corn prices are expected to stay up there.

Because of the wet spring in 1973, about 3½ million acres above that indicated in the March planting intentions were shifted from other crops (primarily corn and cotton) into soybeans (soybeans can be planted later than corn and cotton). The record-high soybean price also encouraged this shift. Normal 1974 planting weather would tend to nullify much of this acreage gain for soybeans.

Another element which could prompt a soybean cutback—likelihood of an increase in rice acreage, since USDA has dropped rice quotas for the first time in 20 years.

Meantime, the supply/demand picture for soybeans and other fats and oils is shaping up like so—

Soybean supplies in 1973/74 total 1.6 million bushels, up 21 percent from last year and a new high. Disposition is slated to swell to 1.4 billion from 1.3 billion in 1972/73. Domestic crushings will probably rise to 775 million bushels, a gain of 50 million. Exports are forecast at 550 million bushels compared with 480 million last season.

Cottonseed supplies total 5.8 million tons, about 2 percent more than last season.

Lard production will continue to trend down, falling to 1.2 billion pounds—off 7 percent from last season.

Butter supplies are expected to melt to 1,050 million pounds—down 8 percent.

Farm income in 1974 could be higher than in any year with the exception of 1973. That, at least, was the ERS assessment in November.

True, next year presents many of the uncertainties of 1973: weather, input shortages, foreign production, inflation rates, international stability of the dollar, slower economic growth at home.

On the other hand, first half 1974 will see continued tight supply-demand for agricultural products, so farm prices and income are apt to remain strong.

Following the protein squeeze of the 1972/73 season, prices of protein feeds will subside in 1973/74. But many livestock feeders may not take advantage of the situation. Reason is they couldn't get all the protein feeds they needed last year for an optimum rate of gain, so they turned to using more nonprotein nitrogen and reduced the protein content in rations.

This year, soybean supplies are more ample and protein feed prices lower. Even so, livestock feeders will be slow to move back to the high protein feed markets.

Domestic use of protein feed in 1973/74 (soybean meal equivalent excluding urea) is projected only 6 percent above 1972/73, which was the least in 4 years.

In a word, the supply and demand situation for feed grains is tight. Production in 1973/74 is forecast at 208 million tons. This is 8 million more than last year but not enough to cancel a 16-million ton drop in carryover of old grain. All told, supply will contract roughly 3 percent to 240 million tons.

Disappearance is figured at 212 million tons. Both domestic use and exports may trail last year's record. Even so, total use will exceed production, bringing a further reduction of about 3 million tons in carryover.

The look-ahead for corn and sorghum—

Corn. Supply: down 4 percent to 6.4 billion bushels. Domestic use: slightly below the 4.6 billion bushels used in 1972/73. Exports: some slippage to around 1.1 billion. Total use: 5.8 billion, off 4 percent from last year and exceeding the 1973 crop. Next October's carryover: tight, in the area of 625 million bushels, well under this year's 707 million. Prices: for October 1973-March 1974, to average about $1 a bushel over last season's $1.32 at the farm.

Grain sorghum. Supply: up 8 percent to over 1 billion bushels and the most since 1966/67. Feed use: much greater, perhaps 10 percent. Exports: may be close to the 212 million bushels of 1972/73. Carryover: around 100 million bushels next October 1, up nearly 40 percent. Prices: above 1972/73.

More beef and poultry but less pork and lamb sums up meat supply pros-

Outlook '74

The 1974 National Agricultural Outlook Conference is set for December 17-19, Jefferson Auditorium, USDA, Washington, D.C. This year's meeting is being held earlier than usual to give farmers and farm suppliers more time to plan for 1974 food production. In 1974 there will be no land set-aside, so farmers must decide for themselves what and how much to plant, according to USDA. This decision will be based on domestic and world demand, the relative profitability of crops, and the availability of inputs.

pects for the winter and spring.

Beef prospects are lifted by a bigger calf crop in 1973 plus a larger supply of feeder cattle. Also, feed costs were down this fall from earlier this year. Next spring's cattle marketings could jump as much as 10 percent from the spring of 1973. On balance, we can expect some rise in beef production next January-June compared with the 1973 period, with most of the increase coming in the spring.

Hog producers seem to be sticking to their earlier plans not to expand production. Farrowing intentions for September-November 1973 indicate no increase from a year earlier, and marketings in first half 1974 will be down some.

Smaller lamb supplies next spring will result from a smaller October-December 1973 lamb crop.

It is likely broiler growers will expand production moderately next spring compared to a year ago. Output in early 1974, however, may about equal early 1973 production.

Long staple cotton will be harder to get next year. Otherwise, cotton supplies will be adequate.

ERS cotton specialists report that cotton stapling around 1-1/16 inches is in a demand squeeze due to spring flooding in the Delta. This comes at a time of fast gains in exports of these staples. Thus, next summer's carryover of all cotton may fall slightly from the 4.1 million bales on August 1, 1973.

Despite steeper fiber prices, textile activity is vigorous. Total fiber consumption—including the manmades—may reach about 12.6 billion pounds in 1973, nearly a tenth above 1972, and about 60 pounds per person. Cotton is not doing as well, however. Tight cotton supplies may lower per capita cotton use about a pound under 1972's 18.4 pounds. Cotton's share of the fiber market may be whittled to 29 percent —4 points less than in 1972.

Mill consumption of cotton during the 1973/74 marketing year will also be lower. Tight cotton supplies, particularly of the medium and longer staples, and high prices may result in about a 4-percent erosion this season from 1972/73's 7.8 million bales.

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Martin Schubkegel
Editor

Diana Morse
Associate Editor

Diane Decker
Walter M. Patrick
Staff Editors

Carol Curtis
Contributing Editor

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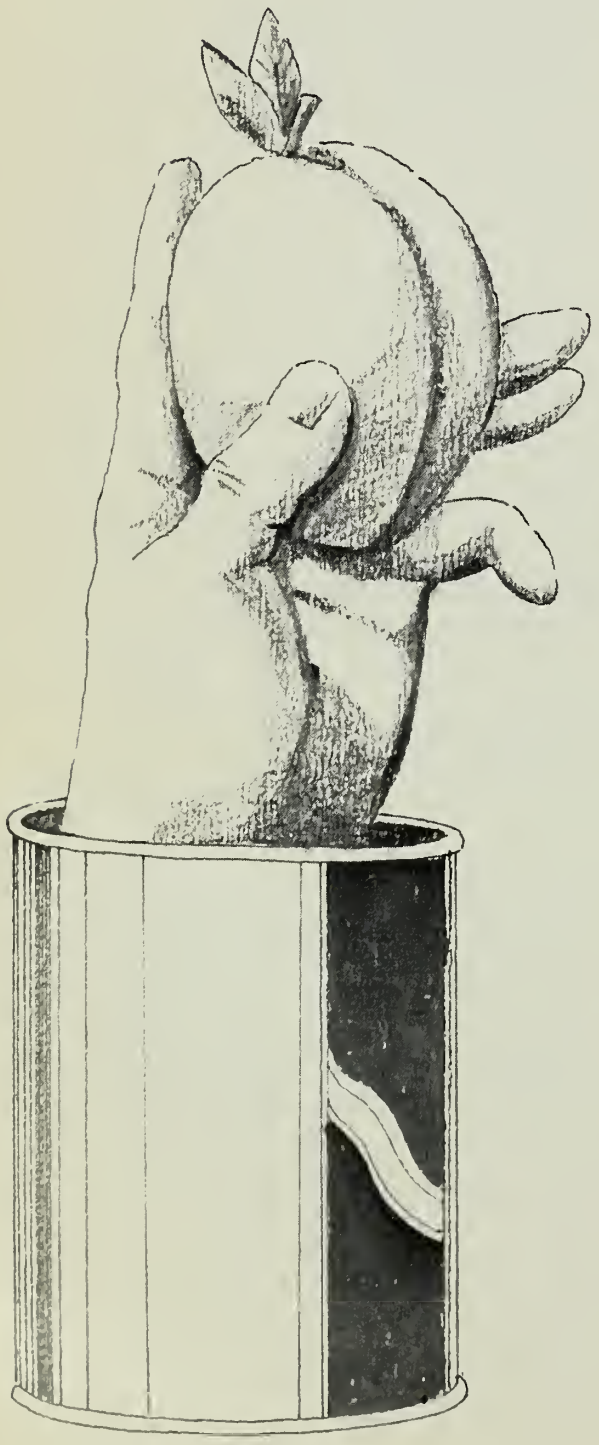
Note: Readers are invited to write for the research materials on which we base our articles. Address queries to The Farm Index, Rm. 1459, Economic Research Service, U.S. Department of Agriculture, Wash. D.C. 20250. Please cite article titles when ordering.

PEACH POTENTIAL IN THE SOUTH

The South is well known for its fresh peaches. But this study indicates it could also dominate the canned peach industry, due to lower production costs and closeness to major consumer centers.



The Southeast—given expanded production of good quality clingstone peaches—could be a more dominant force in the canned peach industry.

That's the indication from an ERS study that examines costs for four producing regions to supply eight major markets in the U.S.

The Southeast could serve more markets more economically than other producing areas except those markets in the far West.

The Southeast's competitive advantage is due primarily to lower production costs and closer proximity to major consumer centers.

Its disadvantage has been in the relative quality of peaches grown in the South for processing and the disinclination of southern growers to produce for the lower price processing market.

The study indicates that the Southeast could competitively supply much of the Nation's demand for canned peaches if it had unlimited production of good quality clingstone peaches.

Today's situation. However, it supplies only about 8 percent today. The West, on the other hand, supplies 90 percent of national demand.

This total bill for providing national requirements for canned peaches came to $205 million in 1972.

Central to the interest in the canned peach industry is the fact that the consumer is changing his peach eating preferences. A longtime trend shows he's leaning more toward canned peaches and products —due both to their convenience and year-round availability—and he's eating fewer fresh peaches.

Last year, for instance, canned peaches took nearly 55 percent of the U.S. peach crop, compared with 40 percent for fresh market peaches.

Traditionally, the South has been the major supplier of peaches for the fresh market in the Nation.

Higher-price market. It has concentrated on this higher priced fresh market—planting its orchards in varieties developed especially for this market and gearing its industry to this outlet. The processing market has been an important outlet only in times of large supplies and low prices.

The West, meanwhile, has concentrated on raising high quality clingstone peaches, which have a more desirable texture and appearance when canned than freestones.

Today all segments of the peach industry are interested in developing an expanded processing market for a combination of reasons—increased costs of producing and marketing fresh peaches, the change in consumer demand, and instability in the fresh market.

The ERS study concentrated on the potential in the Southeast, for there is already considerable interest there in expanded production of canning peaches.

Some 1,000 to 2,000 acres of new cling varieties with improved processing characteristics have been planted in Georgia and South Carolina within the past few years.

"A" for acceptance. The first harvest of these peaches in 1971 resulted in a small volume pack that has reportedly had excellent acceptance by the trade.

Research is now underway to develop and grow firmer fleshed varieties and to improve production and harvesting.

All told, this should serve as the base for expanded canning industry in the Southeast, the study noted.

Available cost studies indicate that the South's production cost advantage is due largely to the differential in land and labor costs. Even with lower yields, this differential is great enough to keep production costs per ton lower in the Southeast than elsewhere.

Southeast canners, being located closer to large centers of population, can also ship their products to more markets at a lower cost.

The four producing centers in the study were Modesto, Calif., Spartanburg, S.C., York, Pa., and Benton Harbor, Mich.

The cost patterns were then developed for canned peach shipments to eight consuming centers—Boston, New York, Chicago, Minneapolis, Atlanta, Houston, Los Angeles, and Seattle.

[Based on manuscript entitled U.S. Peach Industry: Part II. An Interregional Competitive Model for Canned Peaches by Yvonne Davies, Agricultural Research Service, and Warren Trotter, National Economic Analysis Division, ERS, both at Richard B. Russell Agricultural Research Center, USDA, Athens, Ga.]

Land Banks Take The Lead in Farm Mortgage Lending

Farm mortgage loans held by the three main lender groups spurted 12 percent in the year ending June 30, 1973, with the Federal land banks responsible for most of the growth.

Loans held by the land banks mounted 20 percent to $10.1 billion. Those of life insurance companies increased by 4 percent to $5.5 billion, and those of the Farmers Home Administration (FHA) by slightly over 1 percent to $2.3 billion.

New money loaned by the three groups totaled $3 billion in the first 6 months of 1973, 58 percent more than in the 1972 period. Federal land bank lending set a record $1.4 billion. Lending by life insurance companies was $432 million, and by FHA, $289 million.

The upsurge in farm mortgage lending is attributed to lower interest rates in early 1973, a big jump in value of farmland, and rising farm prices. However, by midyear, interest rates charged by life insurance companies began to inch upward.

Principal repayments on farm mortgage loans, as a ratio of the total amount outstanding 6 months earlier, continued to increase during the first half of 1973. Federal land banks reported a ratio of 4.5 percent, life insurance companies 6.5 percent, and FHA 12 percent. For life insurance companies and land banks, the ratio was the highest since the mid-1960's.

Money loaned for real estate purchases by Federal land banks and life insurance companies during the first half of the year amounted to 41 and 35.8 percent of all lending—up 8.1 and 9.4 percentage points, respectively, from a year earlier. The percentage of loans used for refinancing existing debts decreased.

Farm mortgage loans made by life insurance companies in the first 6 months of 1973 averaged $87,440—16 percent larger than a year earlier but 20 percent smaller than in the previous 6-month period.

Loans by Federal land banks averaged $53,810—a third larger than a year earlier and 11 percent more than in the previous 6 months.

The average size of farm ownership loans extended by FHA increased 4.4 percent over a year earlier, reaching $29,110 for first half 1973.

[Based on *Farm Mortgage Lending*, FML–31, by Nan P. Mitchem, formerly with the National Economic Analysis Division.]

Mushrooms Shoot Up In Yields, Value

Mushrooms did a lot of "mushrooming" this past growing year.

—Yields were the highest they've been in recent years, nearly 2½ pounds per square foot

—Total production was up 10 percent to better than a quarter of a billion pounds

—And value rose to $110 million, up $3 million from 1971/72

Fresh market sales—valued at nearly $43 million—accounted for about 30 percent of the crop.

But mushrooms for processing showed less of an increase in volume than in recent years, partly due to heavy imports in the last half of 1972.

Canned imports from Taiwan and South Korea also "mushroomed" this past season, up more than a fifth to 48 million pounds.

[Based on *Vegetable Situation*, TVS–190, October 1973.]

Primer on Poinsettias

The poinsettia is our traditional Christmas flower, right?

Well, not quite. Because this perennial Yuletide favorite isn't really a flower at all, but an ornate shrub. What we take for brilliant red, pink, or white petals are actually leaves, or more correctly, "bracts."

Grown out of doors as a shrub, the poinsettia flourishes in balmy climates like Florida, Bermuda, Central America, or Mexico, where it supposedly originated. The plant made its American debut in the 1820's when its namesake, Joel R. Poinsett, then U.S. ambassador to Mexico, sent some of the shrubs to his home in South Carolina.

The immigrant took well to its new environment in the States, where its popularity continues to mount. In 1970, wholesale poinsettia sales amounted to $18.6 million—from 1950's $4.7 million.

According to the last Census, nearly 2,000 firms produce potted poinsettias for the Yule season. Most of these firms grow the plants from cuttings, which are supplied by plant breeders.

Back only a decade ago, a poinsettia given at Christmas could be enjoyed only briefly, as its leaves would begin dropping soon after the plant was placed in a house. But hardier varieties introduced after 1962 make today's poinsettia a plant that can be admired well into March.

And, with a little special care, this season's poinsettia can be brought into bloom a second Christmas—a feat once reserved for experts. For instructions, check with your local nursery or write ARS Information, USDA, Rm. 348 Federal Center Building, Hyattsville, Md. 20782. Ask for publication CA 34–152.

SOYBEAN PROTEIN Food of the Future?

Photo courtesy of Worthington Foods

Farmers know the soybean as an animal feed. Now consumers are getting to know it as a valuable human food in its own right.

The soybean—a poor but deserving immigrant from Asia—has hit it big in the New World.

The origins of the soybean are oriental, and more than 4,000 years ago it was one of the five sacred grains of China. But until recently, many U.S. farmers considered the soybean little more than a cover crop, to be planted and then plowed under to restore the soil.

In the last 10 years, things have changed. Today the soybean has achieved real status—everyone in the world seems to want soybeans, and if you were fortunate enough to have 2,000 bushels of them last June, you would have grossed $24,000.

Harvested acreage in the United States has more than doubled since 1960, and the soybean is now the farmer's leading cash crop.

Feed into food. The reason for this meteoric rise to fame of the humble soybean is basic. The expansion of flocks and herds of sheep and cattle throughout the world in recent years has been great. The need for high protein animal feed—for which soybeans are a prime source—has risen accordingly. As worldwide demand for animal protein grows, a continuing strain will be placed on the resources necessary to produce this essential nutrient.

One offshoot has been closer scrutiny of the soybean as more than just an animal feed. Researchers are finding that the protein-packed bean has much to recommend it as a human food in its own right.

ERS economists now estimate that about 85 percent of all soybean meal

used domestically is fed to livestock. Most of the rest is either exported or used for industrial purposes, with less than 1 percent going into human food. The utilization of the beans we export is not too different: Almost all the meal is still used for animal feed.

However, predictions are that more and more meal will be used in food products. In fact, food specialists point to soy protein-based foods as one of the most promising areas of nutritional research.

Protein packed. Soybeans contain about 38 percent crude protein, contrasted with 18 percent in beef or fish. They have three times as much protein as eggs or whole wheat flour and 11 times as much as whole fresh milk. The dry bean contains about 80 percent meal and 22 percent oil, with a high percent of unsaturated fatty acids.

Despite its impressive nutritional value, however, it wasn't until the mid-1960's that serious consideration was given to the soybean as food. Thanks to recent research, soybean derivatives are now made into a large number of attractive food items. Soybean products can be added to meats to extend them, or can be made into meat substitutes called analogs. They can also be made to resemble a wide variety of other foods, from diced, dehydrated bell peppers to mayonnaise to nut-like snacks.

From soybean to steak. How does a soybean become a steak look-alike?

First, the soybeans are ground into a flour that is about 50 percent protein. Further processing filters out hard-to-digest carbohydrates and produces soy isolate, a powder that is more than 90 percent protein.

This isolate is mixed with an alkaline liquid to form a solution which is fed under pressure to "spinning" machines in a process similar to the method used to spin rayon and nylon.

The solution is forced through a die containing some 15,000 tiny holes, each about four-thousandths of an inch in diameter. The jets, as they are pushed through the die, stream into an acid solution that congeals them into separate, pale gold threads of protein: tasteless, odorless, closely resembling taffy in texture, and high in protein.

Another texturing process, simpler and cheaper than spinning, is called extrusion. It uses the flour, rather than the isolate, as a base. Soy extenders requiring texturing are usually extruded.

After going through one or the other of these methods, soybeans emerge as textured vegetable protein —which can imitate virtually every meat product in existence today and many other foods as well.

ERS researchers point out, however, that while the versatility of soy protein is great, it is not yet the perfect food.

Lacks amino. The meat substitutes may be somewhat lower than beef in one or more amino acids, the building blocks of protein. A better amino acid balance may be obtained by adding amino acids from other sources, mixing with other vegetable proteins, or mixing with meat or other animal products. For most of the U.S. population, soy proteins could replace some meat and there would still be sufficient proteins in the diet from animal sources.

ERS experts see more of our meat needs being met this way. They predict that by 1980 as much as 20 percent of all processed meat items could be made of vegetable protein.

The big push may well be toward soy extenders.

Cheap and efficient. These extenders are low in cost and can be added to processed meat products. Not only are they less than half the price of meat; they also reduce cooking losses because the soy product absorbs the the water and fat that cook out of meat.

In 1971, USDA permitted the use of up to 30 percent soy extenders to meet the protein requirements of some school lunches. The extenders are also showing up in more restaurant and institution meals.

When it comes to the analogs, however, it's a different story.

Few meatless meats. Though such prestigious schools as Yale University have been experimenting with meat substitutes made from soybeans in their cafeterias, ERS projections to 1980 don't hold much promise that they will replace meat.

While close to the flavor of the meats they imitate, these analogs are priced at about the same level as meat. Soybean hot dogs, for example, go for approximately $.84 for a can of 10, or only slightly less than what you would pay if you bought the real thing.

Another hurdle is acceptance: It took margarine a long time to make substantial inroads into the butter market. And the habit of including meat in every meal is a difficult one to change.

Still, as meat becomes more scarce, and the price goes up, consumers will look around for ways to offset this increase. And the longer they look at the soybean, the more they could grow to like it.

[Based on special material from the National Economic Analysis Division.]

Model-T Soybean?

Henry Ford is best remembered for his contribution to automotive engineering. Less well known is the fact that Ford was also one of the first to experiment with soybeans.

Back in 1929, Ford tried to relate farming to manufacturing by developing the soybean as a food and industrial crop. Ford served soybean flour bread at his company's commissaries, made paints for his cars with soybean oil, and used soybean meal at his foundries.

Ford even tried to make auto parts out of the versatile bean. Besides developing horn buttons, distributor housings, and gearshift handles, Ford developed an entire auto body made from soybeans.

The story goes that one day Ford mistakenly left his soybean car out in the field and some hungry pigs ate it up.

[Based on special material from the National Economic Analysis Division.]

AMERICAN AGRICULTURE

ITS CAPACITY TO PRODUCE

At the request of Agriculture Secretary Earl L. Butz, the Economic Research Service has worked up projections of the production capacity of American agriculture through 1985. The findings, reported here, are intended as a profile of what might happen under a specified set of conditions:

That farm product prices in the future are favorable for increased production.

That there are no restrictions on the use of land.

That supplies of inputs are adequate, and that they are made available at relatively favorable prices.

And, that growing conditions are normal.

The gist of the ERS report—American farmers have the potential to vastly increase their output of the major agricultural products. But note that this relates specifically to potential; there is no attempt to predict whether that potential will be achieved.

Even with a large increase in crops this year, a substantial further gain in production can be expected in 1974, since Government programs will not require farmers to hold any land out of production. Output could continue to climb into the mid-1980's, as more land comes into production and yields mount up.

Part of the greater production capacity would come from expanded use of cropland. But most of the potential would come from higher yields.

In brief, we could—under the conditions outlined in this study—achieve a 50-percent increase in feed grain production by 1985, a one-third increase in soybean production, a 44-percent increase in beef cow numbers, a 30-percent increase in cotton production, a fourfold increase in production of peanuts, and a doubling of rice output.

The whys and wherefores are given in this special 9-page section on "American Agriculture—Its Capacity To Produce."

CROPLAND TRENDS

Since 1950 there's been relatively little net change in the broad categories of land use, despite many shifts within regions. Of the 2.3 billion acres in the U.S. (50 States), cropland still takes up about a fifth . . . grassland pasture and range about a fourth . . . forest land about a third . . . and wasteland about an eighth.

Urban uses claim twice as much land as in 1950 but they still occupy only 1½ percent of the total land area. Highways and airports—despite recent expansions—take only 1 percent.

Although the proportion of all land in cropland has not changed much over the past 25 years, the acreage actually used for crops harvested, fallow, and crop failure declined some 53 million acres between 1949 and 1972—a 14 percent drop from 1949's alltime high of 387 million acres. Part of this decrease reflected a reduction in total cropland, but over half was a result of cropland idled under Federal supply management programs.

Within the comparatively stable U.S. totals there have been important shifts in land use in most regions. All told, since 1950 an estimated 70 million cropland acres have shifted from cropland to permanent pasture, forest land, and urban and transportation uses. Much of the cropland loss took place south and east of the Corn Belt, except in the Delta and southern Florida. East of the Mississippi, land went out of production because of unfertile soils and terrain unsuitable for modern machinery.

However, these losses have been largely offset by new cropland development in certain localities. In Florida, for example, drainage and irrigation brought new land into production. In the Delta States, land was reclaimed through clearing and drainage. Irrigation was chiefly responsible in California, Washington, and the Texas High Plains. In northern Montana, improved methods of dryland farming enabled cropland expansion, and in the Corn Belt, a number of techniques played a role, including drainage, clearing, contouring, and leveling.

Land grazed by livestock has shrunk 13 percent since 1950, but much of it was woodland or land with low productivity for grazing. Overall, grassland pasture and rangeland are about the same as 2 decades ago.

CROP ACRES HARVESTED

Will the downtrend in harvested crop acreage continue? Answer is "no" if prices to farmers are favorable.

Conceivably, with good prices, crop acres harvested could increase

HOW WE USE THE LAND

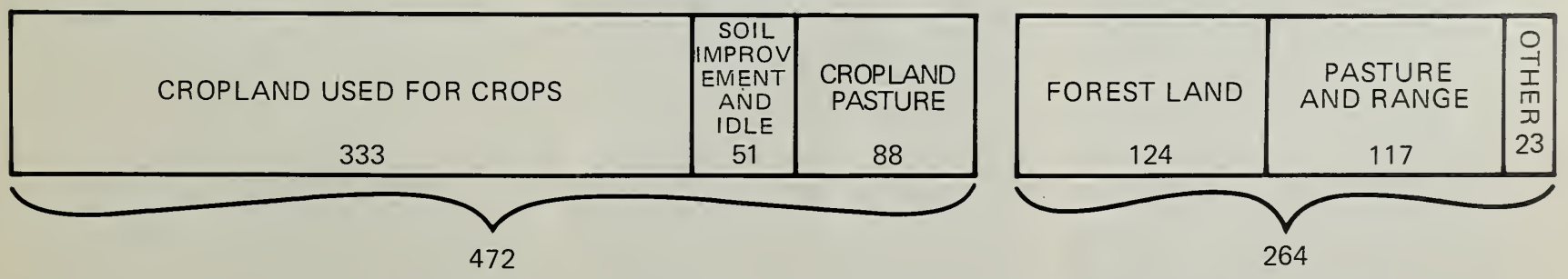
(million acres)[1]

CROPLAND	GRASSLAND PASTURE AND RANGE	FOREST LAND	SPECIAL USE AREAS[2]	OTHER LAND[3]
472	604	723	178	287

1. 1969. 2. Urban areas, highways, parks, wildlife areas, military reservations and farmsteads.
3. Desert, swamp, bare rock, tundra, and similar areas.

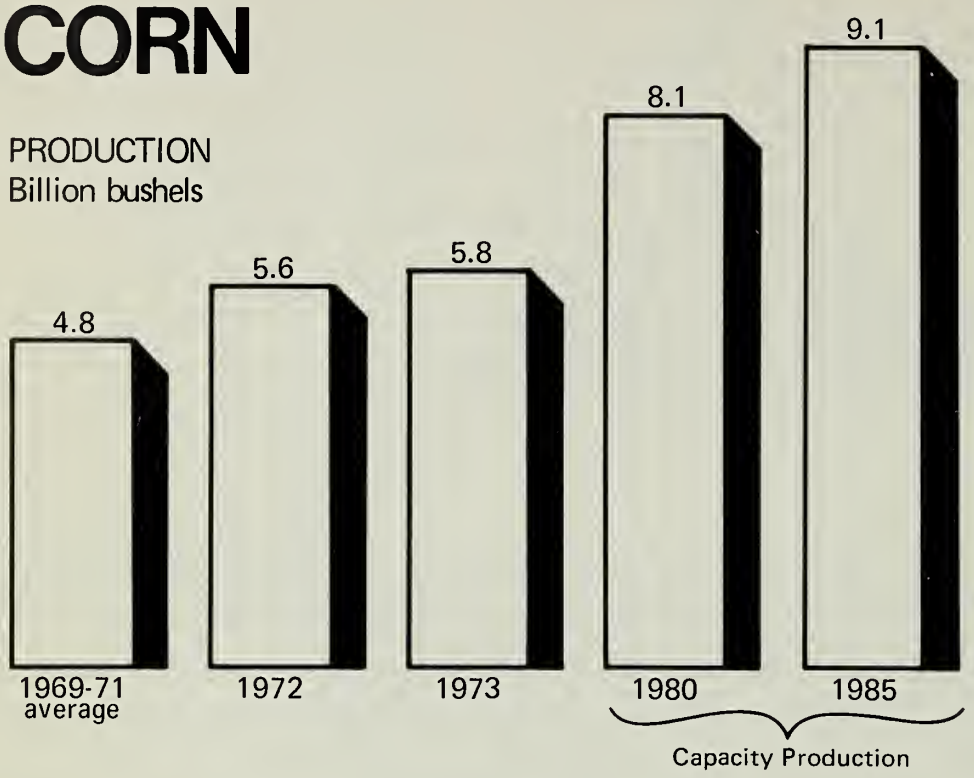
OUR CROPLAND INVENTORY..... .....AND WHAT WE CAN TAP[2]

(million acres)[1]



1. 1969. 2. Other land (Class I, II, and III) not in the cropland inventory, but suitable for regular cultivation if improved; excludes Alaska and Hawaii. Source: **Conservation Needs Inventory,** 1967. Soil Conservation Service, USDA.

CORN



Corn crops may reach 9 billion bushels by the mid-eighties, with much of the expansion in harvested acreage occurring outside the Corn Belt.

YIELDS	
Bushels per acre	
1969-71 average	82.2
1972	96.9
1973	93.8
1980	109.5
1985	120.0

ACREAGE	
Million acres	
1969-71 average	58.7
1972	57.3
1973	61.5
1980	73.7
1985	75.5

by 32 million between 1973 and 1985. This would be in addition to a 28-million acre increase between 1972 and 1973.

Altogether, acreage of crops harvested could reach 350 million acres by 1985, 60 million more than in 1972.

Harvested Cropland
(million acres)

Actual	
1969-71 average	292
1972	290
1973	318
Potential	
1980	345
1985	350

The bulk of the increase would come from the return to production of acres diverted under Federal supply management programs, and from cropland pasture. A smaller portion would be shifted from permanent pastures and the remainder would be developed through irrigation, drainage, and clearing. These last two sources are now a part of the 264 million acres (1967 inventory) in land Classes I, II, and III—land not now being cropped but which is suitable for cultivation.

A large percentage of the 264 million acres has the physical potential for crop use. However, it's likely only a small portion will be shifted under the conditions specified in this study. Reason is that forestry would compete with agriculture in some areas, especially the Delta and Southeast. Also, continued favorable cattle prices would slow any shifts from pasture to crop use, inasmuch as land that would most easily be converted to cropland is generally supporting livestock.

PROMISING REGIONS

Odds are that the additions of cropland would be in these areas:

West. Acreage to be claimed would come from public and private irrigation and some increase in dryland cultivation, primarily in the Plains

States. Hard to foretell is just how much cropland would be added in this region, but in the 1940's, high farm prices stimulated a 20-million acre expansion in dryland cropping.

Southeast and Delta. With favorable prices, cropland area could go up by 5 million acres as a result of stepped-up clearing and drainage projects.

Corn Belt. Attractive prices would encourage reclaiming land that is in small, scattered fields, or has erosion or wetness problems.

A large amount of land in the Northern Cutover, Flatwoods, and Appalachian-New England regions is technically arable. Little would be converted to cropland, though, even under the favorable prices assumed in this study. Most of the land there is in small, scattered fields with cultivation problems. Much has been cropped in the past but has since been abandoned.

PRODUCTION POTENTIAL

For the first time since 1956, farmers in 1974 will not be required to hold any land out of production. The impact will be felt immediately in greater use of cropland.

Beyond 1974, over the next decade and a half, crop output under the conditions in this study would outpace the growth rate of the last 15 years. Farmers would continue to bring more land into production and yields would continue to climb.

With all-out production, corn crops of the mid-1980's could reach 9 billion bushels. And total feed grain production could be 50 percent over the record 1973 level.

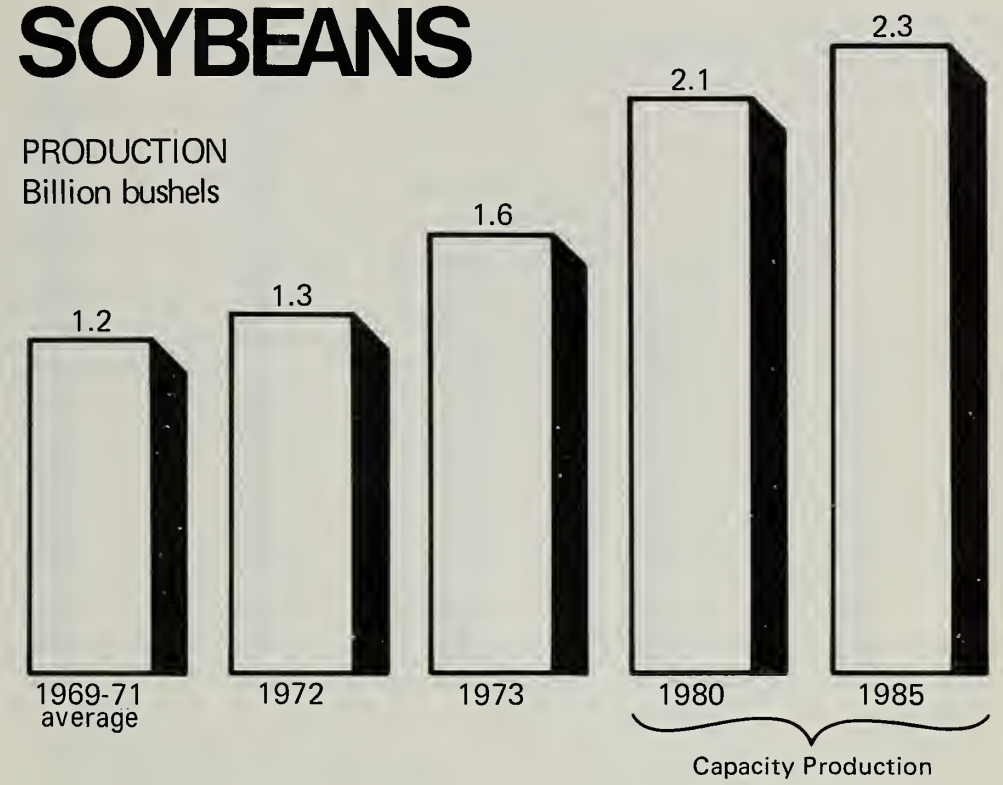
The soybean crop by 1985 could register a one-third increase and could equal wheat production.

Cotton could reverse its long-time downtrend and rise about 30 percent.

Production increases could be dramatic for peanuts and rice, both of which have been under tight acreage controls.

Rice output—with favorable prices and no controls—could double. Pea-

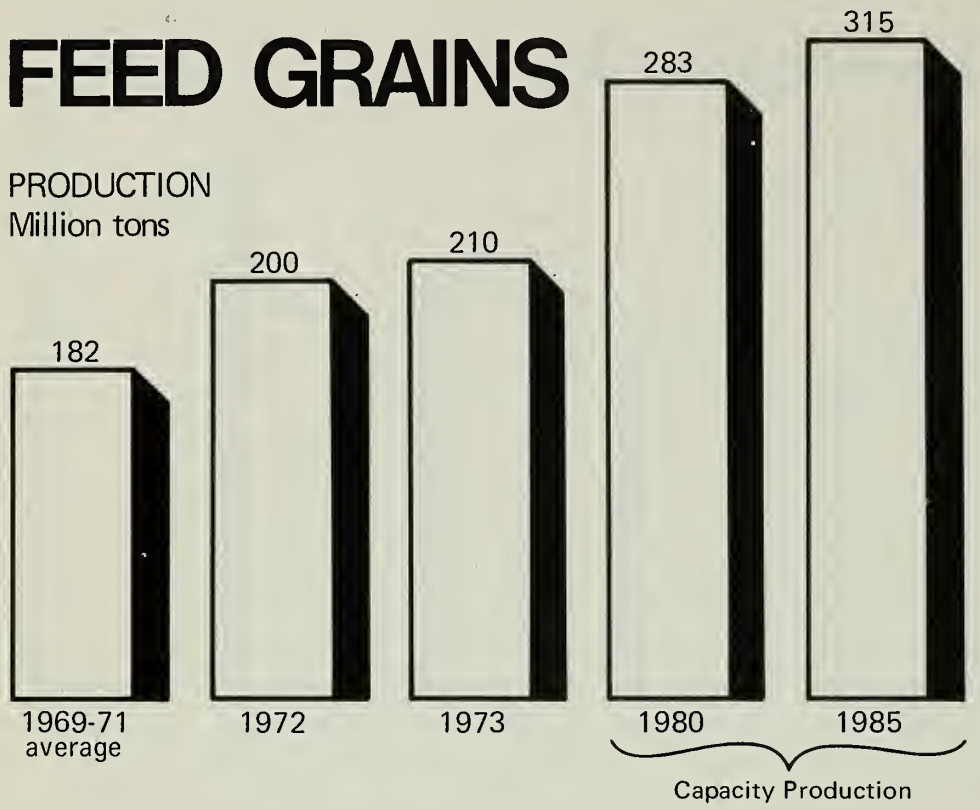
SOYBEANS



Soybeans may take up some 65 million harvested acres of cropland by 1985, while output could post a one-third increase over current levels.

YIELDS	
Bushels per acre	
1969-71 average	27.4
1972	28.0
1973	28.5
1980	32.0
1985	34.5

ACREAGE	
Million acres	
1969-71 average	42.1
1972	45.8
1973	56.2
1980	64.1
1985	65.7



Feed grains, piling up acreage and yield increases, will continue to set production records. Total output in 1985 may soar 50 percent over 1973.

YIELDS	
Tons per acre	
1969-71 average	1.81
1972	2.13
1973	2.05
1980	2.47
1985	2.72

ACREAGE	
Million acres	
1969-71 average	100.4
1972	94.1
1973	102.4
1980	114.7
1985	115.7

nut production could increase three or fourfold. However, rice and peanuts would still command only a minor part of the Nation's cropland resources.

Near term growth in livestock production cannot be as striking as for crops. Immediate prospects, especially for beef cattle and dairy, have been largely determined by production decisions farmers have already made.

By 1985, however, if prices remained favorable, beef cows could jump to 59 million from the 41 million in 1973—a gain of 44 percent.

Beef and veal output is projected to go from 21.7 million pounds in 1973 to 35.3 million in 1985, and beef consumption from 112.7 pounds per person to 159, based on supply.

The potential for expanded hog and poultry production depends mainly on feed availability, rather than on the cropland base. Thus, no projections for production are contained in this study.

IRRIGATED LAND

Acreage under irrigation is expected to grow from 35½ million in 1973 to 38½ million in 1985. This is based on potential private development and projects authorized and funded by the Bureau of Reclamation.

One factor limiting greater expansion is the relatively long time needed for irrigation development.

Other restraints:

√ Limited availability of water for private development

√ Environmental concerns which may put brakes on drainage and clearing, particularly in coastal areas

√ Probable loss by 1985 of 840,000 acres of irrigated land in Texas because of the declining water table.

Over the next 10 or 15 years, irrigation development is projected for Florida for fruit and vegetable production, and for the Delta States, primarily for rice and cotton.

There could be further development in Nebraska, Kansas, and North Dakota. Increases are pro-

jected for Oklahoma and Texas through 1980, followed by a dropoff in irrigation due to depletion of water in the Texas High Plains.

Added acreage in the Mountain States would come primarily from limited public development. Development in the Pacific States would be mainly due to public projects in Washington and Oregon, and to implementation of the State water plan in California.

CROP YIELDS: ALL FARMERS VS. TOP 10 PCT.

Crop	All farmers		Top 10 percent producers	
	1969-71 Average yield	1972 Average yield	1972 yield	Percentage of 1972 average
	Bushels per acre			
Corn	82.2	96.9	143.4[1]	148
Winter wheat	33.3	34.0	50.7[2]	149
Soybeans	27.4	28.0	44.7	160
Cotton (pounds)	437	507	926[3]	183

[1] Excludes yields on irrigated fields in Kansas and Nebraska. [2] Excludes irrigated wheat yields. [3] Includes irrigated cotton in Arizona and California.

YIELDS CRUCIAL

Higher crop yields would contribute the biggest part of the increase in production potential. They would mainly come from increased use of the same technology that boosted yields in the last 2 decades—hybrid seed, greater use of fertilizer and irrigation, improved machines, narrower rows and higher plant populations per acre, chemical weed control, continuous cropping of corn and other high yielding crops. In the future, better management should result in better combinations of inputs and cultural practices.

Tending to slow down the rise in national average yields:

√ Much of the expansion in corn acreage would be outside the Corn Belt where yields usually run lower

√ Most of the increase in wheat acreage would come in fallow areas of the western half of the U.S. where yields are lowest

√ Some land in fallow areas would be continuously cropped, and this would reduce average yields per acre.

MANAGEMENT SKILLS

One of American agriculture's most promising potentials lies with wider application of management skills the Nation's leading farmers are already using. For several important crops, leading producers are routinely getting yields that are at least 50 percent higher than the national average.

Supposing all producers achieved the same yields as the top 10 percent?

All producers cannot in fact reach the levels of the highest tenth, but the tremendous possibilities are shown in the table above.

OTHER POSSIBILITIES

The ERS projections are based on economic potential. They fall well short of the maximum for bringing more land into production and for raising the productivity of both crops and livestock. Obtaining peak performance would require additional public and private programs for land development, and stepped-up programs of research and education in agricultural production.

The projections in this study may be conservative since they did not consider new production possibilities that are now in some stage of research and development. These include:

Crops. Hybrid varieties are being developed for wheat, barley, and soybeans that with a concerted push might be ready for commercial use within 10 years. Hybrids for wheat —with indicated yield increases of 15 to 25 percent—are now available in very limited quantities, but another 5 to 7 years may be needed for these varieties to make a major impact on wheat production.

Higher protein content is possible with new grain varieties. Developments are further along for food grains than for feed grains.

Insect-resistant plant varieties would reduce the cost of insecticides and ease the environmental problems from chemical residues. However, development will probably require several more years.

Livestock. Crossbreeding and artificial insemination of beef cows could result in a 20-percent increase in production. These practices have been slow to catch on. The major limitations appear to be the lack of technical expertise and the need for further refinement of breeding practices.

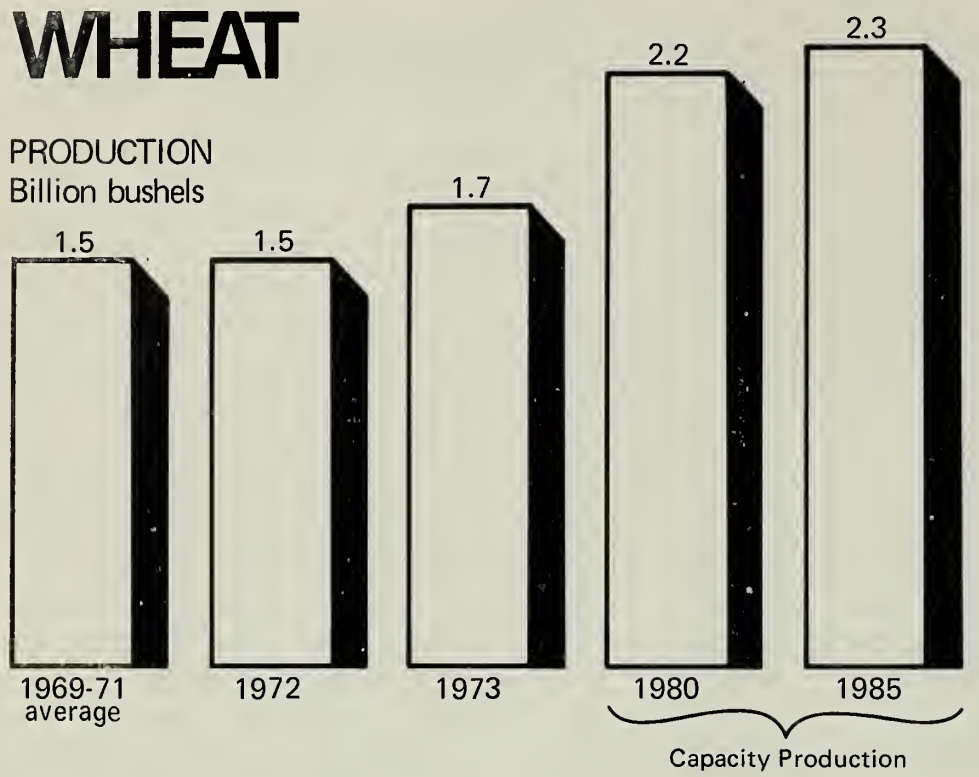
Multiple births, or twinning, in beef cattle offers a big potential for lifting efficiency in beef production. The technology to do this is not yet available but research reports have been encouraging.

Feeding efficiency has room for improvement, and researchers are looking into the possibilities, including greater use of straw for feed—now largely a waste product—and use of manure as a protein source.

Double cropping. A major research and extension effort could probably bring a hefty expansion of double cropping. At present some 4-5 million acres are being double cropped. This involves the planting of a short season summer crop—such as soybeans or sorghum—after harvest of a winter or early spring crop, such as wheat, oats, or barley.

The potential for double cropping has been greatly increased as a result of these recent developments: early maturing varieties of small grains, soybeans, and sorghum; minimum or no-till planting equipment that allows the second crop to be

WHEAT



Wheat harvests under all-out production could surge 40 percent over the present mark. New hybrids only recently available stand to sharply boost average yields.

YIELDS	
Bushels per acre	
1969-71 average	31.9
1972	32.7
1973	32.2
1980	34.5
1985	36.6

ACREAGE	
Million acres	
1969-71 average	46.1
1972	47.3
1973	53.7
1980	62.3
1985	62.3

planted directly in the old crop stubble; chemical weed control so that no cultivation is needed; and greater availability of drying equipment.

SOME PROBLEMS

This study assumes adequate supplies of farm inputs at normal prices, moderate environmental restraints, and adequate marketing and transportation facilities. There are, nonetheless, developments that could reduce output below levels projected.

Fertilizer. Next year may find nitrogen and phosphate fertilizers short of demand because of increased acreage, higher application rates, and strong foreign demand. Over the longer run, supplies of potash and phosphate should be adequate. But there is concern over the availability of nitrogen fertilizer because of the shortage of natural gas.

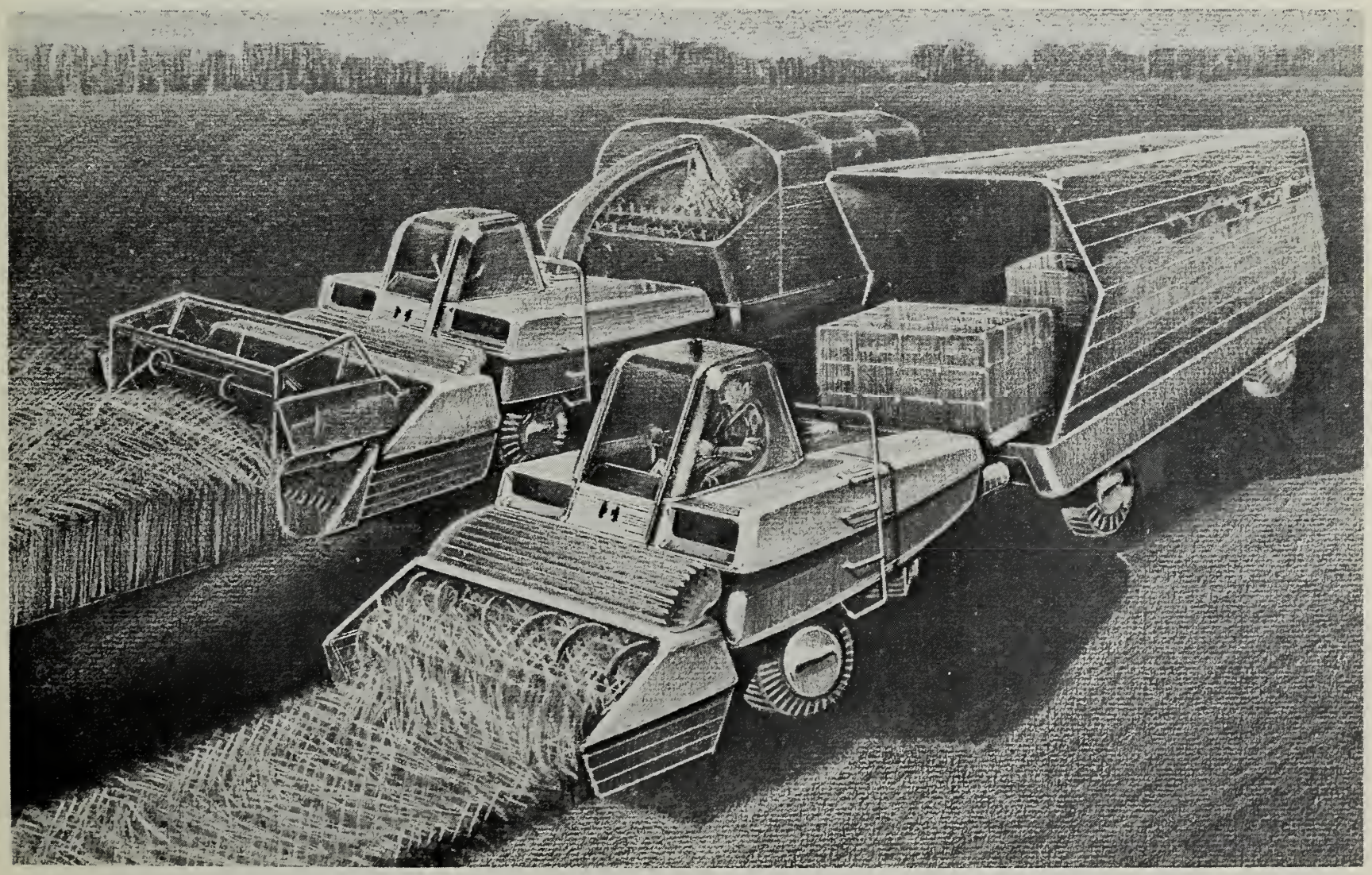
Fuel. Farmers account for only about 3 percent of the Nation's gasoline, diesel fuel, and electricity consumption. Difficulties may arise in the short run in that prices are apt to escalate sharply even though shortages may not be a continuing problem. Also, about half of the motor fuels are used during the April-July planting period, with a secondary peak during the fall harvest. Seasonal shortages are always a possibility, particularly shortages of liquid petroleum gas for crop drying.

Labor. The labor picture will take on new dimensions in future years. Sound labor management practices will be more essential than ever before. More of the labor force may be hired rather than supplied by family members—possibly above one-third by 1980 against one-fourth in 1972.

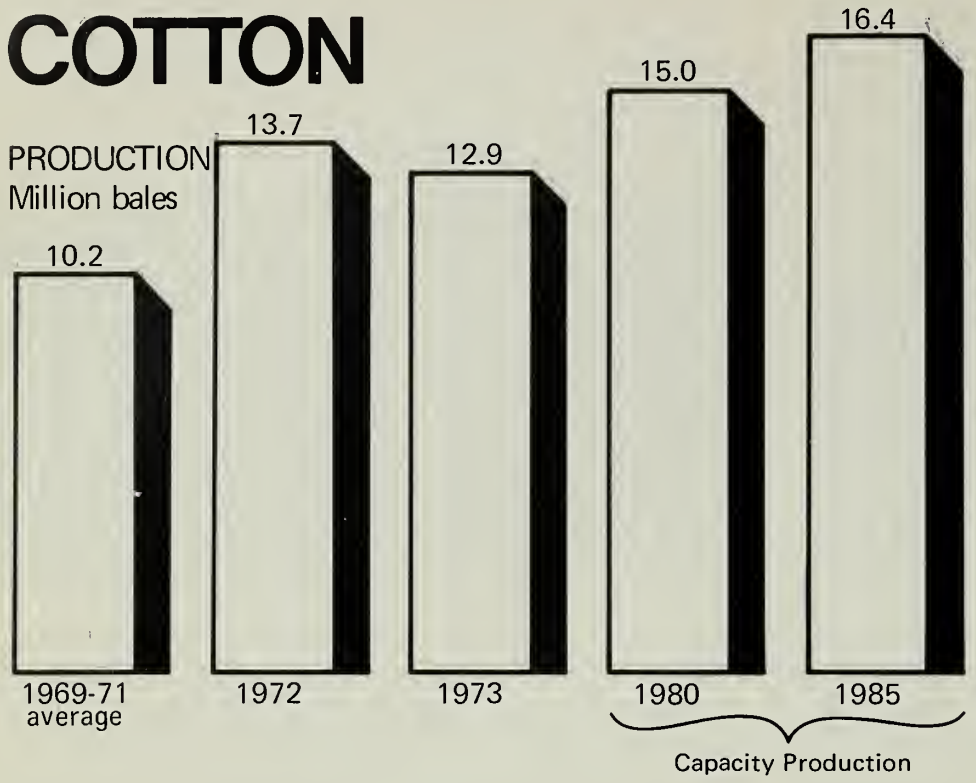
Farmers will have to pay more to attract the skilled workers to operate the increasingly complex machinery and equipment. Minimum wage rates for farm workers will probably be the same as for nonfarm workers. Unemployment insurance for farm workers is likely to be written into law, and collective bargaining will become more common.

(*continued on page 16*)

TOWARD MORE EFFICIENT PRODUCTION. U.S. farmers have tractors harnessing some 212 million horsepower on farms today. With the trend toward larger and more efficient farm machinery, the average horsepower of tractors purchased last year reached 78, and close to a third of all new tractors—as that shown above—had 100 horsepower or more. Another advance is the once-over operation, such as at the upper right, where a plateless corn planter applies insecticide, herbicide, and fertilizer, all in one trip over the field. What's ahead? Such equipment as a forage processing machine, below, that could be used by a hay farmer or rancher in 1980. Turbine-powered, it is planned to put up 15- to 20-pound cow-ration sized bales from windrows at a rate of 20 tons an hour. Bales would be encased in edible, weatherproof polypropylene plastic—made and fortified with vitamins and minerals in the forage machine itself.



COTTON



Cotton production, in an about-face from its long decline, could register a 30-percent increase under full productive capacity.

YIELDS	
Pounds per acre	
1969-71 average	437
1972	507
1973	502
1980	510
1985	535

ACREAGE	
Million acres	
1969-71 average	11.2
1972	13.2
1973	12.4
1980	14.1
1985	14.7

(*continued from page 14*)

Storage and transportation. As in recent years, there will be recurring problems.

Environmental restraints. Federal regulations to improve water quality are now being set up. They will apply to waste discharges from agricultural processing plants and livestock feedlots. By 1977, firms will be expected to use the best practicable control technology that is then available. And by 1983, firms must adopt the best available technology that is economically possible.

This will mean some small fruit and vegetable processors, tanners, and others will be forced to close down. This may cause regional shifts in the industry with intermittent shortages until larger firms can expand their capacity.

About a fourth of the fed beef producers are expected to have problems in controlling surface water runoff. Small producers, who may not be able to afford the control devices, will be hardest hit, and the regulations may hasten the trend toward larger operations.

Roughly two-fifths of present dairy operations will have water runoff problems. Production systems will need to be changed. The impact on production could be significant.

A fifth or more of all hog producers will have to adopt new ways for handling surface runoff. The impact in the near term will be lower hog production and higher prices. There will probably be no great impact on prices over the longer pull.

To avoid severe repercussions on land use, a concerted effort will be needed to develop and disseminate improved systems of management for crops and livestock that will meet environmental needs without excessive disruption. With sufficient time, farmers will probably be able to work out efficient solutions for these environmental problems.

[From materials developed by several ERS researchers. For further information, contact David W. Culver or Milton H. Ericksen, Commodity Economics Division.]

A MARKET IN CHANGE

Of the numerous changes marking the fluid milk industry, the rise of supermarkets that operate their own processing plants stands out as one of the biggest.

The demise of the quart glass milk bottle is probably the milk industry's most visible sign of change.

Less obvious, but more sweeping, are changes in the industry's structure, market performance, and in the regulations governing the distribution and sale of fluid milk. These shifts provided the focus of a recent study of 144 U.S. milk markets.

The markets, as diverse as Grand Forks, N.D., and New York, N.Y., ranged in volume from 3 million to 466 million pounds of milk per month.

Plants decline. Most dramatic change was the drop in milk processing plants—from around 8,500 in 1948 to just over 2,000 in 1971. Declines were sharpest among small plants, while those selling at least 4 million pounds per month actually increased in number.

Meantime, distribution areas have mushroomed. In the early postwar days, plants seldom distributed their products beyond a 30-40 mile limit. Today a distribution radius of 100 miles is commonplace, and 200 miles isn't unusual. Thus, while the number of milk plants within any specific area has dropped sharply, the number competing for sales in that region has fallen off much less.

Open competition. Also, sales in most U.S. milk markets aren't dominated by a few major competitors. The study found that small markets absorbing less than 50 million pounds of milk per month were the only ones in which more than half of all sales went to the top four competitors. In the 14 largest markets, the four chief rivals captured less than a fourth of total milk sales.

(*continued on next page*)

The most significant change in market structure has come from supermarket groups that buy or build their own milk processing plants. In 1964, 21 supermarket groups operated 36 milk plants, with most of the output sold to their own stores. By 1971, 26 supermarkets controlled 51 plants.

During 1964-72, the volume processed by supermarket-owned plants more than tripled to 388 million pounds per month. And their share of total milk sales by commercial processors advanced from 3 percent to nearly 9 percent.

Marketing rules. Regulations governing the marketing of fluid milk also underwent major change and revision during the postwar period. For instance, the number of States that regulate resale milk prices—either wholesale or retail—now stands at 14, versus a peak of 21 in the mid-1930's and only 11 in the mid-1950's.

The fifties brought a sharp rise in trade practice regulations in States without resale price fixing. State trade practice laws forbid, among other things, giving free credit, unreasonable credit extensions, and secret rebates or discounts. Effects of the regulations have been mixed, depending on type of law and extent of enforcement.

Sanitary regulations, while necessary to public health, have in some cases been used to give local milk dealers an advantage in certain markets. For example, some have contained restrictions which forbid the distribution of milk that's been pasteurized outside the city limits. In recent years, however, most States and local jurisdictions have reshaped these laws to allow free competition and to facilitate the flow of fluid milk products.

Open dating. Some 40 years ago, sanitary authorities commonly required open dating on fluid milk products. After waning in the years that followed, interest in open dating has recently been rekindled.

Initial studies showed that open dating drove up costs, as retail outlets using the system began returning more and more unsold milk. Followup reports now indicate this is no longer the case.

To gauge market performance of the fluid milk industry, the ERS study used two measures—marketing margins and innovativeness.

During 1954-72, average marketing margins for whole milk increased only 6¢ per half gallon. The gain would have proven considerably larger had there not been a shift from home delivery to store outlets and to larger containers.

Marketing margins vary widely throughout the U.S., but tend to run somewhat higher in States that regulate resale prices.

Innovation rate. To measure innovativeness, the study compiled a list of all new products, containers, and services introduced in the fluid milk industry since the mid-thirties. The average date when markets accepted these developments became a measure of their innovativeness.

The Milwaukee, Wis., market ranked highest, with 1955 the average date by which all innovations had been introduced. Burlington, Vt., was slowest to respond to new developments, with an average date of 1964.

Researchers determined that markets with resale price controls were generally not as receptive to innovations than those without. In fact, the study found that the most highly regulated—thus "sheltered"—markets, whether protected by sanitary regulations, trade practice laws, restrictive licensing, etc., tended to be the least innovative.

[Based on manuscript entitled Market Structure, Institutions, and Performance in the Fluid Milk Industry, by Alden C. Manchester, National Economic Analysis Division.]

The Milkman Goeth

The familiar rattle of milk bottles in the milkman's basket has become little more than a memory.

For not only have the old glass bottles given way to plastic and paper containers, but the neighborhood milkman is fast disappearing from the American scene.

Back in the mid-1930's, as much as three-fourths of all fluid milk was delivered directly to consumers' doorsteps—usually from nearby dairies. But by the mid-fifties, milkmen were delivering just over half our milk, as dairy products became more accessible in stores, and the costs of home delivery, compared with store delivery, steepened.

The steady decline in home milk delivery accelerated to an average 2.4 percent per year following 1965. Latest figures show that less than a fifth of our milk now arrives via the milkman.

Stepped-up store sales have accounted for nearly all the decline in sales on home delivery routes. Total sales by all types of stores jumped from a third of the total in the early fifties to nearly two-thirds in the early seventies.

[Taken from *Sales of Fluid Milk Products, 1954-72*, MRR–997, by Alden C. Manchester, National Economic Analysis Division.]

1973 Turkey Crop Could Be Biggest Ever

The 1973 turkey crop is expected to reach a record 132 million birds, 2 percent above the previous high in 1972.

Of the 23 States that produced more than a million birds this year, nearly half increased their output over 1972 production. However, of the 10 largest producing States—accounting for nearly 80 percent of the total turkeys raised—only Minnesota, North Carolina, Wisconsin, and Texas are raising more birds. Minnesota, the leading State, will produce around 23 million birds, up 10 percent from 1972; North Carolina, the third largest at 13 million, up 12 percent; Texas, the fifth largest at 9 million, up 16 percent; and Wisconsin, in the tenth place, up 12 percent.

By regions, the number of turkeys will be up about 6 percent in both the West North Central and the South Atlantic, and 2 percent in the South Central.

[Based on information by William E. Cathcart, Commodity Economics Division, in *Poultry and Egg Situation*, PES–278, September 1973.]

Recent Publications

Conditional Market Forecasts and Implications for the U.S. Soybean Economy. Jimmy L. Matthews, National Economic Analysis Division. Reprinted from the *Fats and Oils Situation,* FOS-268, July 1973. ERS-529.

Implications of dollar devaluation, short supplies of competing high protein feeds and soybean exports to the Soviet Union for the U.S. soybean economy in 1972/73 are explored with an econometric model. Ramifications of recent events are extended to the 1973/74 and 1977/78 crop years for soybeans.

Price-Quantity Relationships for Selected Retail Cuts of Pork. Lawrence A. Duewer, Commodity Economic Division. AER-245.

In examining price-quantity relationships of eight cuts of pork (loins, hams, butts, spareribs, sausage, picnics, bacon, and lunch meat) and three types of outlets (chain, independent, and convenience), equation results of a specific cut were found not to differ greatly by retail outlet. A shift in pork demand between 1965 and 1966 was noted, and the fact that poultry was a closer competitor of pork than was beef. The study also showed differences in demand among pork cuts, and examined retail outlet trends.

Men's Attitudes Toward Cotton and Other Fibers in Selected Clothing Items. Evelyn F. Kaitz, National Economic Analysis Division. MRR-1012.

The study was designed to provide insights into measures which might be taken by natural fiber producers to market their commodity more effectively, to provide guidelines for product improvement research, and to provide consumers with an opportunity to express their opinions toward various fibers used in clothing items.

Agriculture in the United States and the Soviet Union. Fletcher Pope, Jr., Valentine Zabijaka, and William Ragsdale, Foreign Demand and Competition Division. FAER-92.

This study compares the agriculture of the U.S. and the USSR by using recent statistical information on agricultural resources, structure, resource allocation, and output. The tables in this report provide a comparison of acreage, yields, and production of grain, output of other agricultural crops, livestock numbers, livestock product output, selected agricultural inputs, and agricultural trade of the two countries.

Single copies of the publications listed here are available free from The Farm Index, Economic Research Service, Rm. 1459-So., U.S. Department of Agriculture, Washington, D.C. 20250. However, publications indicated by (*) may be obtained only by writing to the experiment station or university. For addresses, see July and December issues of The Farm Index.

Analysis of the Effects of Cost-of-Service Transportation Rates on the U.S. Grain Marketing System. John R. Franzmann, Oklahoma State University, and L. D. Schnake, Commodity Economics Division. Oklahoma State University Technical Bulletin 1484.*

The purpose of this study is to analyze effects of a cost-of-service transportation rate structure on the U.S. grain marketing system. Cost of transportation services to carriers (truck, rail, and barge) for transporting grain and flour were developed by synthesis for specified U.S. regions for marketing year 1966/67.

Florida's Fresh Orange Industry: Selected Marketing Practices, Costs, and Margins. Alfred J. Burns and Warren K. Trotter, Commodity Economics Division. ERS-531.

This report discusses practices and trends in marketing Florida oranges, with emphasis on the fresh market. Data for Temple oranges are also included in the report.

Aqua Ammonia's Economic Potential As a Preservative for Stored High-Moisture Corn. Clarence A. Moore, National Economic Analysis Division, and E. G. Lancaster and R. J. Bothast, Agricultural Research Service. ERS-535.

An annual savings of $150-$175 million could result from treating corn stored on farms with aqua ammonia. Should aqua ammonia treatment of high-moisture corn prove technically effective and feasible, farmers could save 5 cents per bushel on preservation measures.

Controlled Environment Agriculture: A Global Review of Greenhouse Food Production. Dana G. Dalrymple, Foreign Development Division. FAER-89.

The purpose of this report is to provide an introduction to the development, technology, and economics of controlled environment agriculture in the form of greenhouse food production. This study is a useful analysis of the prospects and implications of this unique form of agriculture.

Marketing Research at State Agricultural Experiment Stations, Past, Present, Future. H. B. Metzger, Cooperative State Research Service.

The objectives of this review are to provide background information on the history and current status of marketing research at SAES and to develop suggestions for new approaches to the planning and conducting of marketing economic research.

Horticultural Service Businesses: Dollar Volumes and State Rankings. Richard Hall and Stephen M. Raleigh, Jr., Commodity Economics Division. ERS-526.

Horticultural services such as landscape planning and counseling, lawn and garden services, and shrub and tree services are a fast-growing segment of agriculture. Gross receipts for horticultural services by 14,000 firms were $545 million in 1969. Fifty-two percent of this business was concentrated in Pennsylvania, New York, California, Ohio, and Florida.

Sales of Fluid Milk Products, 1954-72. Alden C. Manchester, National Economic Analysis Division. MRR-997.

Newly developed data indicate that total sales of all fluid milk products by all processors in the U.S. increased from 43.2 billion pounds in 1954 to nearly 56 billion pounds in 1972. The dollar value of these sales rose from $4.3 billion in 1954 to $6.5 billion in 1972.

Wheat—Regional Supply Analysis. Robert G. Hoffman, National Economic Analysis Division. Reprinted from the *Wheat Situation,* WS-225, August 1973.

This wheat supply model, based on regional planted and harvested acreage equations, represents Part I of a two-part wheat econometric framework being developed to measure the factors affecting wheat production and price levels.

Livestock Feed Balances for the USSR. Donald Chrisler, Foreign Demand and Competition Division. ERS-For. 355.

This report assembles published Soviet official data on livestock feeds, develops documented estimates of feed use consistent with the official data, and provides pertinent Soviet definitions and concepts. In addition, rudimentary information is presented on livestock-feed relationships in the U.S. and the USSR.

The Feed-Livestock Economy of Eastern Europe: Prospects to 1980. Francis S. Urban, H. Christine Collins, James R. Horst, and Thomas A. Vankai, Foreign Demand and Competition Division. FAER-90.

This report presents results of a study analyzing and projecting to 1980 the feed-livestock economy of Eastern Europe. Special emphasis is put on demand and trade potential of meats, grains, and oilseed feed products and on competitive relationships among the principal livestock feeds.

Addresses of State experiment stations:

This ready reference list for readers wishing to order publications and source material published through State experiment stations will be updated again in July 1974.

STATE	CITY	ZIP CODE
ALABAMA	Auburn	36830
ALASKA	Fairbanks	99701
ARIZONA	Tucson	85721
ARKANSAS	Fayetteville	72701
CALIFORNIA	Berkeley	94720
	Davis	95616
	Parlier	93648
	Riverside (Citrus Research Center)	92502
COLORADO	Fort Collins	80521
CONNECTICUT	New Haven	06504
	Storrs	06268
DELAWARE	Newark	19711
FLORIDA	Gainesville	32601
GEORGIA	Athens	30601
	Experiment	30212
	Tifton	31794
GUAM	Agana	96910
HAWAII	Honolulu	96822
IDAHO	Moscow	83843
ILLINOIS	Urbana	61801
INDIANA	Lafayette	47907
IOWA	Ames	50010
KANSAS	Manhattan	66502
KENTUCKY	Lexington	40506
LOUISIANA	Baton Rouge	70803
MAINE	Orono	04473
MARYLAND	College Park	20742
MASSACHUSETTS	Amherst	01002
MICHIGAN	East Lansing	48823
MINNESOTA	St. Paul	55101
MISSISSIPPI	State College	39762
MISSOURI	Columbia	65201
MONTANA	Bozeman	59715
NEBRASKA	Lincoln	68503
NEVADA	Reno	89507
NEW HAMPSHIRE	Durham	03824
NEW JERSEY	New Brunswick	08903
NEW MEXICO	Las Cruces N.M. State University (P.O. Box 3–BF)	88001
NEW YORK	Ithaca (Cornell Station)	14850
	Geneva (State Station)	14456
NORTH CAROLINA	Raleigh (Box 5847)	27607
NORTH DAKOTA	Fargo (State University Station)	58102
OHIO	Columbus (Ohio State University)	43210
	Wooster	44691
OKLAHOMA	Stillwater	74074
OREGON	Corvallis	97331
PENNSYLVANIA	University Park	16802
PUERTO RICO	Rio Piedras	00928
RHODE ISLAND	Kingston	02881
SOUTH CAROLINA	Clemson	29631
SOUTH DAKOTA	Brookings	57006
TENNESSEE	Knoxville	37901
TEXAS	College Station	77843
UTAH	Logan	84321
VERMONT	Burlington	05401
VIRGINIA	Blacksburg	24061
VIRGIN ISLANDS	St. Croix	00850
WASHINGTON	Pullman	99163
WEST VIRGINIA	Morgantown	26506
WISCONSIN	Madison	53706
WYOMING	Laramie (University Station Box 3354)	82070

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References to this index are by month and page

Month/Page

Economic Trends

Item	Unit or Base Period	1967	1972 Year	1972 Sept.	1973 July	1973 Aug.	1973 Sept.
Prices:							
Prices received by farmers	1967=100	—	126	129	172	207	191
Crops	1967=100	—	115	117	164	195	183
Livestock and products	1967=100	—	134	138	179	217	198
Prices paid, interest, taxes and wage rates	1967=100	—	127	128	146	151	150
Family living items	1967=100	—	124	126	138	141	142
Production items	1967=100	—	122	124	148	157	154
Ratio [1]	1967=100	—	100	101	118	137	127
Wholesale prices, all commodities	1967=100	—	119.1	120.2	134.9	142.7	140.2
Industrial commodities	1967=100	—	117.9	118.7	126.9	127.4	128.1
Farm products	1967=100	—	125.0	128.6	173.3	213.3	200.4
Processed foods and feeds	1967=100	—	120.8	121.8	146.5	166.2	156.3
Consumer price index, all items	1967=100	—	125.3	126.2	132.7	135.1	135.5
Food	1967=100	—	123.5	124.8	140.9	149.4	148.3
Farm Food Market Basket: [2]							
Retail cost	1967=100	—	121.3	122.6	141.5	153.0	150.7
Farm value	1967=100	—	124.4	128.6	166.7	200.2	178.9
Farm-retail spread	1967=100	—	119.3	118.3	125.5	123.1	132.8
Farmers' share of retail cost	Percent	—	40	41	46	51	46
Farm Income: [3]							
Volume of farm marketings	1967=100	—	112	118	104	103	111
Cash receipts from farm marketings	Million dollars	42,693	60,671	5,477	6,207	7,521	7,800
Crops	Million dollars	18,434	25,075	2,313	2,813	3,120	3,700
Livestock and products	Million dollars	24,259	35,596	3,164	3,394	4,401	4,100
Realized gross income [4]	Billion dollars	49.0	68.9	68.7	—	—	91.4
Farm production expenses [4]	Billion dollars	34.8	49.2	49.4	—	—	65.9
Realized net income [4]	Billion dollars	14.2	19.7	19.3	—	—	25.5
Agricultural Trade:							
Agricultural exports	Million dollars	—	9,404	710	1,218	1,470	1,449
Agricultural imports	Million dollars	—	6,459	547	635	720	639
Land Values:							
Average value per acre	Dollars	[6]168	[7]219	—	—	—	[8]247
Total value of farm real estate	Billion dollars	[6]181.9	[7]230.5	—	—	—	[8]258.7
Gross National Product: [4]	Billion dollars	793.9	1,155.2	—	—	—	1,304.5
Consumption	Billion dollars	492.1	726.5	—	—	—	816.0
Investment	Billion dollars	116.6	178.3	—	—	—	202.0
Government expenditures	Billion dollars	180.1	255.0	—	—	—	279.0
Net exports	Billion dollars	5.2	−4.6	—	—	—	7.6
Income and Spending: [5]							
Personal income, annual rate	Billion dollars	629.3	939.2	951.3	1,035.6	1,047.3	1,058.5
Total retail sales, monthly rate	Million dollars	26,151	37,365	37,746	42,778	42,363	42,474
Retail sales of food group, monthly rate	Million dollars	5,759	7,918	8,005	9,128	8,964	9,003
Employment and Wages: [5]							
Total civilian employment	Millions	74.4	[9]81.7	[9]82.3	[9]84.6	[9]84.4	[9]85.1
Agricultural	Millions	3.8	[9]3.5	[9]3.6	[9]3.5	[9]3.4	[9]3.5
Rate of unemployment	Percent	3.8	5.6	5.5	4.7	4.8	4.8
Workweek in manufacturing	Hours	40.6	40.6	41.0	40.5	40.5	40.8
Hourly earnings in manufacturing, unadjusted	Dollars	2.83	3.81	3.86	4.06	4.06	4.13
Industrial Production: [5]	1967 = 100	—	115	118	127	127	127
Manufacturers' Shipments and Inventories: [5]							
Total shipments, monthly rate	Million dollars	46,449	62,466	64,503	73,248	73,021	72,832
Total inventories, book value end of month	Million dollars	84,655	107,719	106,168	113,910	114,907	115,793
Total new orders, monthly rate	Million dollars	46,763	63,514	66,620	75,145	76,113	74,923

[1] Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wage rates. [2] Average annual quantities of farm food products purchased by urban wage-earner and clerical worker households (including those of single workers living alone) in 1959-61—estimated monthly. [3] Annual and quarterly data are on 50-State basis. [4] Annual rates seasonally adjusted second quarter. [5] Seasonally adjusted. [6] As of March 1, 1967. [7] As of March 1, 1972. [8] As of March 1, 1973. [9] Beginning January 1972 data not strictly comparable with prior data because of adjustment to 1970 Census data.

Sources: U.S. Dept. of Agriculture (Farm Income Situation, Marketing and Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Monthly Retail Trade Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale Price Index).

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